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unit in one frame, the scrolling display incrementally displaying one or more rows of dots sufficient to display the font; and

designating the display operation.

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32. (Amended) An information display method, comprising:

controlling the display operation by forming a fixed display when an amount of information to be displayed is not greater than a number of lines displayable in one frame, and automatically forming a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the operation of automatically forming a scrolling display being provided without manual operation of a user, the scrolling display incrementally displaying one or more rows of dots sufficient to display a font; and

designating the display operation.

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REMARKS

Claims 1-33 are pending in this application. By this Amendment, claims 1, 3, 9 and 29-32 are amended. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Applicant gratefully appreciates the courtesy extended to Applicant's attorney during the July 9 personal interview with Examiner Luu and Examiner Chung. The points discussed during the personal interview are reemphasized in this Amendment.

CLAIM REJECTIONS

Claims 1-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kawasaki et al. (U.S. Patent No. 4,246,578) in view of Ying et al. (U.S. Patent

No. 4,057,849), and further in view of Burgan (U.S. Patent No. 6,201,526). Applicant respectfully traverses the rejection.

In particular, Applicant respectfully asserts that the combination of Kawasaki, Ying and Burgan does not disclose or suggest an information display apparatus, including at least display control means causing a display unit to automatically form a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on the display unit in one frame, where the scrolling display incrementally displays one or more rows of dots sufficient to display a font, as recited in independent claim 1, and similarly recited in independent claims 3, 9 and 29-32.

Kawasaki describes a pattern generation display system of a CRT, where the width of a font varies according to the type of character displayed.

Ying describes a text-editing system of a CRT, where a display controller blanks a character position in the line following the position of a word-ending or word-break word so that the next display line begins with this character.

Burgan discloses only the horizontal pixel-by-pixel scrolling of characters across a display. See column 6, lines 61-64. Moreover, Burgan discloses only the horizontal procession of alphanumeric characters in a scrolling display. See column 8, lines 37-41. Further, Burgan teaches that messages of a length greater than the maximum number of characters displayable on the viewable portion of a single line visual display automatically process from the right edge of the visual display to the left edge until the entire message has appeared on the visual display. Compare column 3, lines 31-36, to column 3, lines 60-63; see also column 9, lines 46-52.

However, Burgan does not disclose a scrolling display that incrementally displays one or more rows of dots sufficient to display a font. Accordingly, because Burgan fails to compensate for deficiencies in Kawasaki and Ying, a combination of the references would

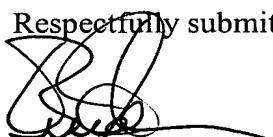
not have resulted in a display apparatus that more effectively displays a large volume of information on a limited size of display unit.

Thus, because it would not have been obvious to combine the applied references to arrive at the claimed invention, Applicant asserts that independent claims 1, 3, 9 and 29-32 define patentable subject matter. Claims 2, 4-8, 10-28 and 33 depend from independent claims 1, 3 and 9 and therefore also define patentable subject matter. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103(a) be withdrawn.

In view of the foregoing remarks, Applicant submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-33 are earnestly solicited.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is requested to contact Applicant's attorney at the telephone number listed below.

Respectfully submitted,



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JAO:BAH/mdw

Attachment:

Appendix

Date: August 23, 2002

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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## APPENDIX

## Changes to Claims:

The following is a marked-up version of the amended claims:

1. (Three Times Amended) An information display apparatus, comprising:
  - a display unit that displays information;
  - display control means for controlling a display operation of said display unit;

and

an operating unit that designates a display operation of said display unit, said display control means causing a new line of characters to be started wherever it would otherwise be required to break ~~the-a~~ word across two lines of a plurality of lines of characters of said information, and displaying the plurality of lines of characters of said information on said display unit in a font having a width that varies according to the type of character displayed, and

said display control means controlling the display operation of said display unit so that a spacing between the characters is constant, and said display control means causing said display unit to automatically form a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the scrolling display incrementally displaying one or more rows of dots sufficient to display the font.

3. (Amended) An information display apparatus, comprising:
  - a display unit that displays information;
  - display control means for controlling a display operation of said display unit;

and

an operating unit that designates a display operation of said display unit, said display control means causing said display unit to form a fixed display when an amount of

information to be displayed is not greater than a number of lines displayable on said display unit in one frame, and

said display control means causing said display unit to automatically form a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the operation of automatically forming a scrolling display being provided by virtue of automatic operation of the display control means and operating unit without manual operation of a user, the scrolling display incrementally displaying one or more rows of dots sufficient to display a font.

9. (Four Times Amended) An information display apparatus comprising:  
a display unit that displays information;  
display control means for controlling a display operation of said display unit;  
and

an operating unit that designates a display operation of said display unit, said display control means causing said display unit to form a fixed display when an amount of information to be displayed on said display unit is not greater than an amount displayable in one frame, and said display control means causing said display unit to automatically form a vertical scrolling display a plurality of times continuously when an amount of information to be displayed exceeds an amount displayable on said display unit in one frame, the operation of automatically forming a scrolling display being provided by virtue of automatic operation of the display control means and operating unit without manual operation of a user, the scrolling display incrementally displaying one or more rows of dots sufficient to display a font.

29. (Twice Amended) An information display apparatus, comprising:

a display unit that displays information;

a display control device that controls a display operation of said display unit;

and

an operating unit that designates a display operation of said display unit, said display control device causing a new line of characters to be started wherever it would otherwise be required to break the word across two lines of a plurality of lines of characters of said information, and displaying the plurality of lines of characters of said information on said display unit in a font having a width that varies according to the type of character displayed, and

said display control device controlling the display operation of said display unit so that a spacing between the characters is constant, and said display control means causing said display unit to automatically form a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the scrolling display incrementally displaying one or more rows of dots sufficient to display the font.

30. (Amended) An information display apparatus, comprising:

a display unit that displays information;

a display control device that controls a display operation of said display unit;

and

an operating unit that designates a display operation of said display unit, said display control device causing said display unit to form a fixed display when an amount of information to be displayed is not greater than a number of lines displayable in one frame, and

said display control device causing said display unit to automatically form a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the operation of automatically forming a scrolling display being provided without manual operation of a user, the scrolling display incrementally displaying one or more rows of dots sufficient to display a font.

31. (Twice Amended) An information display method, comprising:

performing a display operation by displaying information;

controlling the display operation by starting a new line of characters wherever it would otherwise be required to break the word across two lines of a plurality of lines of characters of said information, displaying the plurality of lines of characters of said information in a font having a width that varies according to the type of character displayed, controlling the display operation so that a spacing between the characters is constant, and controlling the display operation by automatically forming a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on a display unit in one frame, the scrolling display incrementally displaying one or more rows of dots sufficient to display the font; and

designating the display operation.

32. (Amended) An information display method, comprising:

performing a display operation by displaying information;

controlling the display operation by forming a fixed display when an amount of information to be displayed is not greater than a number of lines displayable in one frame, and automatically forming a vertical scrolling display when an amount of information to be displayed exceeds a number of lines displayable on said display unit in one frame, the operation of automatically forming a scrolling display being provided without manual

operation of a user, the scrolling display incrementally displaying one or more rows of dots sufficient to display a font; and  
designating the display operation.